Control measure

Assess impact of release or spill

Contents

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Control measure knowledge

Once the spread and scale of the incident has been determined, it is important to identify who and what is at risk in that area. Hazardous materials can have an adverse effect on:

- People (including emergency responders)
- Animals
- Infrastructure
- Environment

Assessing the likelihood of harm to groups or locations in each of these three areas will develop a risk profile for the incident and enable tactical decisions to be taken based on priorities.
The risk of harm to people will be based on either the potential for release of energy or the intrinsic harmful properties of the substance if individuals are exposed. Responders will need to assess whether people can shelter-in-place as an alternative to evacuation. The assessment should consider:

- Health risks posed by the hazardous materials
- Size of the affected area
- Construction of buildings
- Time of day
- The number, condition and age of occupants
- Weather conditions
- Potential duration of release
- Availability of safe and suitable accommodation
- Availability of responders
- Numbers of personnel and other agencies required to carry out the evacuation
- Risk to responders carrying out the evacuation
- Communicating the evacuation (for example, fixed alarm system, responders with megaphones, door knocking, avoiding panic, radio and TV announcements)
- Safe holding area required for members of the public being evacuated

Risk to infrastructure is mainly concerned with the potential for hazardous materials to degrade, corrode, contaminate or damage the urban environment. For example, they may cause damage to roadways, buildings or other structures. Often the potential for these adverse effects to occur will be based on contact time of the substance and therefore, whilst a lower priority than saving life, early intervention can often prevent major disruption to the community.

Strategic actions

Fire and rescue services should:

- Ensure personnel that respond to hazardous materials incidents are provided with knowledge, skills and understanding to determine the effects of the incident on the environment and local community

Tactical actions

Incident commanders should:

- Assess the impact of hazardous materials on people, animals, infrastructure and the environment

- Consider a shelter-in-place strategy based on the number of people already exposed or potentially at risk